



Implementation Directive Outline

Cover

Signature Page (*senior resource providers*)

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Section Title: I. Introduction

A1857-J-86

- **Guidelines:**

- Content: Describe and highlight the purpose and intent of the Implementation Directive (ID) and the top-level operational goals and general approach for the Joint Capabilities Technology Demonstration (JCTD)
- Format:

	Word
Section Type	Narrative
Section Length	$\frac{1}{2}$ Paragraph Maximum



Example: I. Introduction

The Joint Capabilities Technology Demonstration (JCTD) FY07-09 is a joint interagency sponsored program. This Implementation Directive (ID) provides guidance and direction for implementing the JCTD. The primary goal of this ID is to define the JCTD program, its objectives and key participating agencies with their associated areas of responsibility and resources. The JCTD will provide a capability to Combatant Commands for establishing maritime domain awareness within their area of responsibility (AOR) for coalition defense. The JCTD will provide the Combatant Commander significant improvements in maritime domain awareness (MDA) in support of the National Maritime Strategy. The JCTD builds upon ongoing Maritime Domain Awareness (MDA) research and demonstration efforts. It will demonstrate the integration of new MDA technologies and operational concepts to improve significantly the deployed joint warfighter's maritime situational awareness and will provide enhancements to ship track generation, global coverage and dissemination of information to all security levels. More importantly, the JCTD will seek to demonstrate how SCI sources can lead to automated cueing of potential threats. This JCTD will deliver the desired technology on time using spiral demonstrations, Operational Utility Assessments (OUA) and appropriate CONOP with TTP. This controlled process will enhance effective transition to a funded POR.



Section Title: II. Coalition / Joint / Interagency Operational Problem

A1857-J-87

- **Guidelines:**

- Content: Describe operational deficiencies that limit or prevent acceptable performance or mission success
- Format:

	Word
Section Type	Narrative
Section Length	½ Page



Example: II. Coalition / Joint / Interagency Operational Problem

Unable to identify, prioritize, characterize and share global maritime threats in a timely manner throughout multiple levels of security and between interagency partners.

- Insufficient ability to achieve and maintain maritime domain awareness (intelligence, people, cargo, vessel [cooperative and uncooperative]) on a global basis (to include commercially navigable waterways)
- Insufficient ability to automatically generate, update and rapidly disseminate high-quality ship tracks and respective metadata (people, cargo, vessel) that are necessary to determine threat detection at the SCI level on a 24/7 basis on SCI networks
- Insufficient ability to aggregate maritime data (tracks) from multiple intelligence sources at multiple levels of security to determine ship movement, past history and current location
- Inability to automatically ingest, fuse and report “SuperTracks” (tracks + cargo + people + metadata [associated data]) to warfighters and analysts at the SCI level
- Inability to generate and display automated rule-based maritime alert notifications based on a variety of predetermined anomalous activity indicators established from SCI Intelligence Community channels



Section Title: III. Overall Objective and Approach

A1857-J-88

- **Guidelines:**

- Content: Describe the overall programmatic approach and key elements of the JCTD
 - The objectives are described in terms of desired outcomes

- Format:

	Word
Section Type	Narrative
Section Length	$\frac{1}{2}$ Paragraph Maximum



Example: III. Overall Objective and Approach

The objective of the JCTD is to demonstrate and transition to the COCOM joint warfighter and the interagency customer a capability for global, virtually persistent, maritime display / awareness of transoceanic-capable vessels with enhanced tracking automation and alerting. It will demonstrate how this richer vessel tracking information can be used in conjunction with an improved information-sharing environment based on Service-Oriented Architecture (SOA) principles for integrated analysis, highlighting the interaction of vessels, cargo and people of interest, and disseminating these fused products across the IC and down to lower classifications. The JCTD will install at the National Maritime Intelligence Center (NMIC) and will provide a portal for maritime information access to users at the SCI level and data downgrading for dissemination at lower security levels via guard technology. It will conduct a two-spiral development, test, and operational demonstration approach during FY07 and FY08 and will culminate in a transition year in FY09. The first operational demonstration [OD] will demonstrate global ship tracking with Multi-INT data fusion and a set of user definable alarms/alerts at the SCI level. The second OD will show the expansion of Multi-INT data sources and alarm/alert technology along with a demonstration of a data-tagging technology that enhances tracking capabilities. Data will be disseminated via guard technology to the Secret and SBU levels as well as disseminated to other IC users via the SOA. Each OD will be preceded by a technical demonstration (TD) held either at NMIC or at the test and integration facility. Following the second OD and pending the OUA, an initial set of hardware, software and project documentation for transition will be delivered to NMIC.



Section Title: IV. Organizational Structure

Roles and Responsibilities

A1857-J-89

- **Guidelines:**

- Content: Identify management areas and structure including:
 - Oversight Group (OG), Integrated Management Team (IMT), operational, technical, transition, oversight, supporting programs
 - Define top level functions for each management area and working arrangements between management areas
 - Information is illustrated through narrative for each management area

- Format:

	Word
Section Type	Narrative
Section Length	½ Page



Example: IV. Organizational Structure Roles and Responsibilities

- Overall management of this JCTD will be monitored by the Oversight Group (OG), chaired by the Deputy Under Secretary of Defense for Advanced Systems and Concepts, (DUSD(AS&C)). Members of the OG include the signatories of this ID, COCOM, OPNAV, and USCG. The OG will meet annually or as necessary. Daily management of the JCTD is provided by the Operational Manager (OM), Technical manager (TM), Deputy Technical Managers (DTM), Transition Manager (XM), and the Oversight Executive (OE), working as an Integrated Management Team (IMT).
- The user sponsor is COCOM. The Navy component OM, responsible for developing the CONOP and TTP and DOTMLPF recommendations and planning, scheduling and conducting the operational demonstrations and OUA. The OM will identify the critical operational issues (COI) and establish the Top-Level Capabilities and Metrics. This information will be the basis for data collection and assessments described in the Integrated Assessment Plan (IAP) along with MOEs and MOPs. The OM will participate in TM and XM Integrated Product Teams (IPT).
- The lead Service / agency—the U.S. Navy—provides the TM, who is responsible for all aspects of planning, coordination, and execution of the system engineering, integration, and test activities required to prepare the system for demonstration. The TM and DTMs will also participate in OM and XM IPTs and will be responsible for overall JCTD financial management including OM, XM and contractor activities for this JCTD.
- The lead Service / agency provides the overall XM, who is responsible for developing and implementing the transition strategy and approach to support the Extended Use (EU) and Follow-on Development, Acquisition, Fielding and Sustainment of the JCTD capability. Upon favorable assessment by the OM, the XM will implement the EU and the follow-on development and acquisition plans in coordination with the coalition partner nations, Services, and agencies. The XM will convene and chair a transition IPT to coordinate a transition strategy for the participating nations and agencies with sufficient time to address a timely transition from the JCTD to selected partner nations' acquisition programs and U.S. PORs. The XM will also participate in OM and TM IPTs.
- The U.S. Navy Operational Test & Evaluation Force (OPTEVFOR) will support the OM by developing the IAP and supporting the conduct of the Limited Operational Utility Assessment (LOUA) and OUA.



Section Title: V. Top Level CONEMP or CONOP

A1857-J-90

- **Guidelines:**

- Content:

- Describe Commander's intent in terms of overall operational picture within an operational area / plan by which a commander maps capabilities to effects, and effects to end state for a specific scenario:
 - Commander's written vision / theory that becomes fusion engine of means, ways and ends
 - Describe an approach to employment and operation of the capability in a joint and coalition environment
 - Not limited to a single system command, Service, or nation but can rely on other systems and organizations, as required

- Format:

	Word
Section Type	Narrative
Section Length	1 Paragraph Maximum



Example: V. Top Level CONEMP or CONOP

At the top level, the CONOP is based on the implementation of the JCTD among the NMIC and NORTHCOM. The JCTD hardware and software suites within the NMIC establish an improved information-sharing environment (ISE) based on SOA principles at the SCI level. The NMIC maintains the enhanced, integrated, fused maritime SCI information that it produces in a Web-based repository. Maritime analysts are thus able to access this information and perform threat analysis by conducting advanced queries of multiple data sources. Furthermore, the NMIC disseminates the fused data products to analysts at locations such as NORTHCOM at the SCI level. Fused data products are transmitted to lower classification enclaves, as shown in figure 2-2 based on end-user needs and capabilities. The shared, common operating picture (COP) is updated at the NMIC, then shared with mission partners. When intelligence updates reveal increased threat indicators, NORTHCOM senior leadership directs its J-2 division to obtain detailed information regarding a known deployed threat vessel. The J-2 analysts, now armed with enhanced JCTD capabilities, are able to collaborate with other maritime partners to find and fix the target of interest from the JCTD multisource data, and conduct an assessment of the information. The target of interest and associated information is shared with mission partners with the regular updating of the COP. In turn, J-2 is able to provide NORTHCOM senior leadership with an accurate composite maritime picture inclusive of the threat data, and NORTHCOM in turn notifies partner agencies and support elements to take the appropriate actions.



Section Title: VI. Overall Transition Strategy

A1857-J-91

- **Guidelines:**

- Content:

- Define top level overall transition strategy, recommendations, and way forward for JCTD:
 - Driven by Desired Capabilities, CONOP, Capabilities Solution
 - Identify primary / major potential transition paths:
 - Extended Use of Interim Capability
 - Follow-on Development, Production, Fielding and Sustainment for targeted POR / Programs
 - Establish preliminary top level time frames (i.e., years)
 - Driven by overall demonstration and OUA strategy completion timelines

- Format:

	Word
Section Type	Narrative (Optional Chart)
Section Length	$\frac{1}{2}$ Paragraph Maximum



Example: VI. Overall Transition Strategy

- The transition of the JCTD may be through either or both of a two-pronged approach.
- Follow-on Development, Production, Fielding and Sustainment (FY09 and beyond) is the first prong. It can be conducted in parallel with the EU. The XM will work closely with the selected nations and U.S. POR / Programs for early transition of the JCTD capabilities and early coalition data use by U.S. subscribers. U.S. POR include DCGS-N, GSSC-I3 and NCES. A recommendation that describes the courses of action (COA) available to the region coalition partners for follow-on technical support is part of the sustainment strategy. It will be incumbent upon the host nations to decide which COA to follow.
- The FY08-09 Extended Use (EU) of Interim Capability or Go To War Capability is the second prong. The OM will finalize the CONOP and TTP, training package, DOTMLPF recommendations, capabilities documentation and the deployment package (if applicable), incorporating results from ongoing operational use by the coalition and external use operators. The TM will provide technical support on an as-needed basis for the interim capability.



Section Title: VII. Schedule

A1857-J-92

- **Guidelines:**

- Content: Identify major operational, technical, transition and programmatic tasks for JCTD
 - Uses Gantt chart illustration
 - Capture “pre”, implementation and post-JCTD time frames and key decision points
 - Define applicable budget and POM time frames

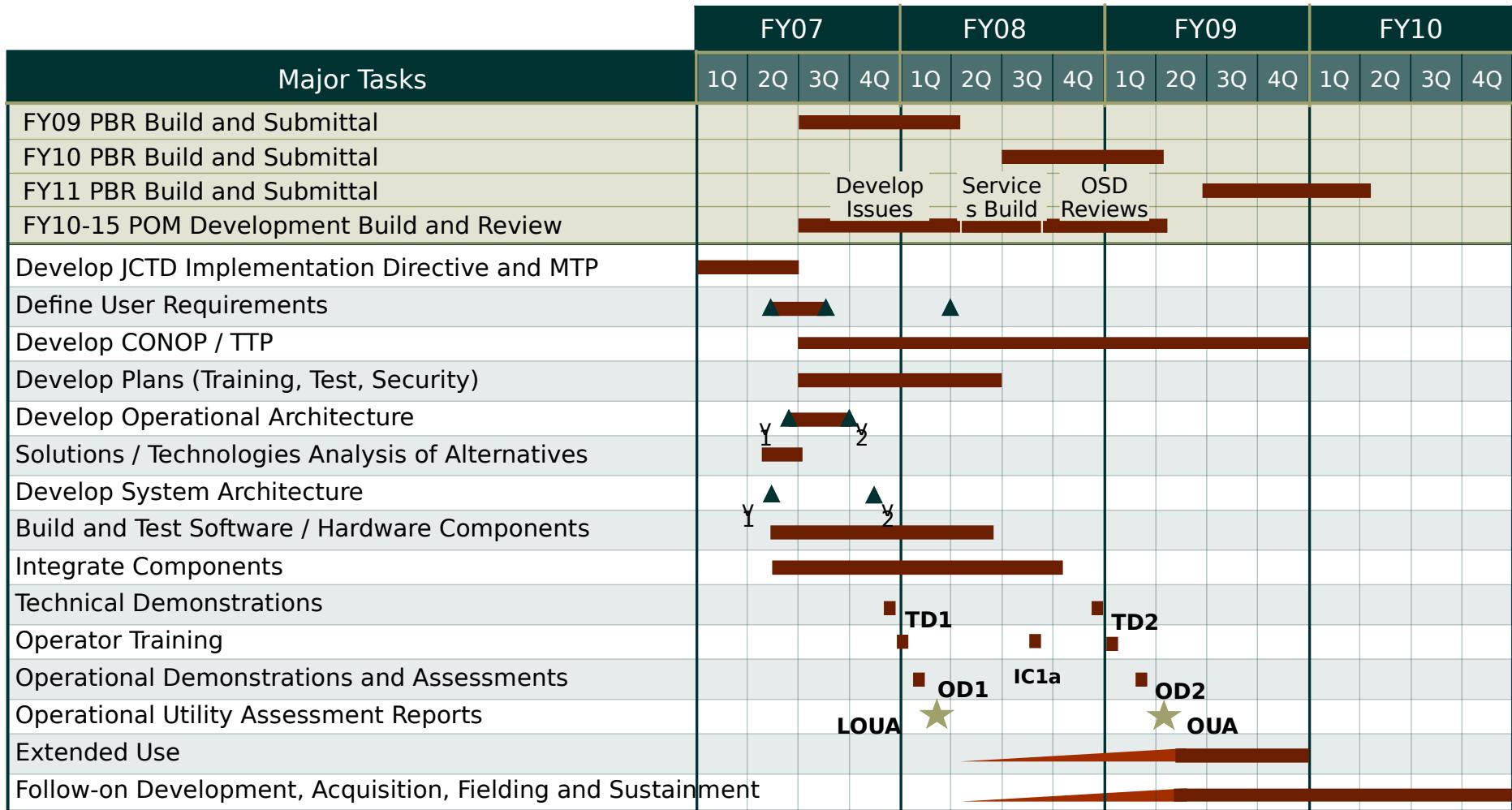
- Format:

	Word
Section Type	Gantt Chart
Section Length	1 Slide



Example: VII. Schedule

A1857-J-93





A1857-J-47

Section Title: VIII. Funding Tables

• Section Sub-Title: A. Cost Plan

• Guidelines:

- Content: Identify major operational, technical and transition tasks and funding per year for JCTD:
 - Capture implementation years for JCTD funding
 - Illustrate in (\$thousands)
 - Identify Basis for Estimates (BOE) methodology term for cost, and insert in block at the top of the spreadsheet table. Multiple methods may be used.
 - Analogy: Subjectively compares the JCTD cost items with one or more existing similar items / systems / capabilities for which there is accurate cost and technical data.
 - Parametric: “This pattern holds” known as the statistical method, this technique generates an estimate based on JCTD cost item performance or design characteristics using elements from similar items / systems / capabilities. It differs from analogy in that it uses multiple systems and makes statistical inferences about the cost estimating relationships.
 - 3. Build-Up: A “bottom-up” method of cost analysis that is the most detailed of all the techniques and the most costly to implement. Each element must be costed to build the cost estimate for the entire JCTD.
 - Expert Opinion: The other methods are not available.
- Format:

	PowerPoint	Word
Section Type	Excel Spreadsheet	
Section Length	1 Slide / Table	



Example: VIII. Funding Tables

A. Cost Plan [per Task and FY]

A1857-J-48

2009 Candidate Review Board XYZ CTD Functional Cost Estimation (\$ Thousands)					
Task / Item	FY09	FY10	FY11	TOTAL	
Basis of Estimate: (see Cost Plan Guidelines)					
Operational					
Concept of Operations (CONOPS) / Tactics, Techniques, Procedures (TTPs)				\$0	
Demonstrations and Assessments				\$0	
Training				\$0	
Travel				\$0	
Joint / Operational Utility Assessment J / OUA Reports				\$0	
Operational Total Estimate	\$0	\$0	\$0	\$0	
Technical					
Site surveys and trade off analysis				\$0	
Architecture and integration software systems				\$0	
Technical Tests and Demos				\$0	
Harbors / Ports Facilities computers, servers, displays				\$0	
National Operations Center computers, servers & displays, switches, modems				\$0	
Regional Coordination Center computers, servers, displays, switches, modems				\$0	
UPS / back-up power sources/power conditioners				\$0	
Communications hardware (TBD), including SATCOM terminals				\$0	
Coastal radar suites				\$0	
AIS systems				\$0	
EO/IR sensor suites				\$0	
Cell Phones				\$0	
Binoculars				\$0	
UHF/VHF Radios				\$0	
Towers (AIS, radars and comms)				\$0	
Training Package				\$0	
Travel				\$0	
Technical Documentation				\$0	
Technical Total Estimate	\$0	\$0	\$0	\$0	
Transition					
Interim Capability Sustainment (discuss with OE on BA4 transition funding)				\$0	
Transition Planning				\$0	
Travel				\$0	
Transition Total Estimate	\$0	\$0	\$0	\$0	
Estimated Total Cost	\$0	\$0	\$0	\$0	



A1857-J-193

Section Title: VIII. Funding Tables

- **Section Sub-Title: B. Funding**
- **Guidelines:**
 - Content: Identify major funding and sources per year for JCTD
 - Identify organizational funding sponsors, program element and project numbers
 - Identify Direct and Dedicated In-Kind funding
 - Indicate Committed, Uncommitted or TBD funding status for each funding source
 - Capture implementation years for JCTD funding
 - Illustrate in (\$thousands)
 - Funding Risk (i.e., Green, Yellow, Red) will automatically react to funding data entries
 - **NOTE:**
 - Use care when entering data in cells / fields. Select cells / fields have embedded formulas
 - Above funding term definitions are provided in second embedded template sheet when DUSD(AS&C) Example template is activated using Excel
- Format:

	PowerPoint	Word
Section Type	DUSD(AS&C) Template	
Section Length	Line Entries As Needed	



Example: VIII. Funding Tables

B. Funding [per Source and FY]

A1857-J-194

Oversight Executive

01-Feb-08

Funding Risk: Green

FY09-12 AS&C | CTD Funding Template

(For use in presenting FY-09 I CTD Candidate funding fair-share profiles)

I CTD Title - Example						Yellow \$\$ cells are formula driven. (Dollars in Thousands)					
Organization	(Note 1) Commitment	Type of Funding	2 Funding Description	3 Program Element (PE)	Project #	FY-09	FY-10	FY-11	FY-12	Total	
USN	Committed	RDT&E/6.3	Cash	0602123N	N/A	\$ 2,000	\$ 2,000	\$ 1,000	\$ -	\$ 5,000	
USA	TBD	TBD	Cash	N/A	N/A	\$ -	\$ -	\$ -	\$ -	\$ -	
USAF	Committed	RDT&E/6.3	Cash	0603401F	5021	\$ 1,000	\$ 1,000	\$ 2,000	\$ -	\$ 4,000	
SOCOM	TBD	TBD	Cash			\$ -	\$ -	\$ -	\$ -	\$ -	
DISA	TBD	TBD	Cash			\$ 500	\$ 500	\$ -	\$ -	\$ 1,000	
DTRA	Committed	RDT&E/6.3	Cash	0602715BR	BF	\$ 1,000	\$ 1,000	\$ 2,000	\$ -	\$ 4,000	
USMC	TBD	TBD	Cash			\$ -	\$ -	\$ -	\$ -	\$ -	
DISA	Uncommitted	TBD	Cash			\$ -	\$ 1,000	\$ 1,000	\$ -	\$ 2,000	
NIMA	Committed	RDT&E/6.3	Cash	0305102BO	TBD	\$ 6,500	\$ 6,500	\$ -	\$ -	\$ 13,000	
Total Service & Defense Agency (committed)						\$ 10,500	\$ 10,500	\$ 5,000	\$ -	\$ 26,000	
DUSD (AS&C)	TBD	RDT&E/6.3	Cash	0603648D8Z	648	\$ 4,000	\$ 4,000	\$ 2,000	\$ -	\$ 10,000	
Total Cash Committed Funding:						\$ 14,500	\$ 14,500	\$ 7,000	\$ -	\$ 36,000	
Stated I CTD Cash Requirement:						\$ 15,000	\$ 16,000	\$ 8,000	\$ -	\$ 39,000	
Delta to Cash Requirement:						\$ (500)	\$ (1,500)	\$ (1,000)	\$ -	\$ (3,000)	
Service/Agency Committed:		\$26,000									
Percent Cash Committed		92%							AS&C Percent Total: Cash Only		
Funding Risk (Cash):		Green							AS&C Percent Cash:		

Dink Section

Organization	(Note 1) Commitment	Type of Funding	2 Funding Description	3 Program Element (PE)	Project #	FY-09	FY-10	FY-11	FY-12	Total
USAF	Committed	TBD	Dink			\$ 5,000	\$ 3,000	\$ -	\$ -	\$ 8,000
USN	Uncommitted	TBD	Dink			\$ -	\$ 2,000	\$ -	\$ -	\$ 2,000
USA	TBD	TBD	Dink			\$ -	\$ -	\$ -	\$ -	\$ -
USMC	TBD	TBD	Dink			\$ -	\$ -	\$ -	\$ -	\$ -
Total Cash & Dink Committed Funding:						\$ 19,500	\$ 19,500	\$ 7,000	\$ -	\$ 46,000
Stated I CTD Cash & Dink Requirement:						\$ 20,000	\$ 21,000	\$ 8,000	\$ -	\$ 49,000
Delta to Cash & Dink Requirement:						\$ (500)	\$ (1,500)	\$ (1,000)	\$ -	\$ (3,000)



A1857-J-98

Section Title: IX. Points of Contact

• Guidelines:

- Content: Identify major funding and sources per year for JCTD:
 - Identify organizational funding sponsors, program element and project numbers
 - Identify Direct and Dedicated In-Kind funding
 - Capture implementation years for JCTD funding
 - Illustrate in \$thousands

- Format:

	Word
Section Type	Table
Section Length	1 Table



Example: IX. Points of Contact

A1857-J-99

Position	Name	Organization	E-Mail	Phone
• Operational Manager				
• Transition Manager				
• Technical Manager				
• Oversight Executive				